

**CLAIMS**

4. The use of partial glycerides of predominantly unsaturated C<sub>16-24</sub> fatty acids, optionally mixed with anionic surfactants, as lubricants in drilling fluids for geological exploration which contain water and optionally a  
5 separate oil phase.
2. The use claimed in claim 1, characterized in that partial glycerides with a pour-point - as measured to DIN ISO 3061 - of at most 10°C are selected.
3. The use claimed in claim 1 or 2, characterized in that partial  
10 glycerides with a pour point - as measured to DIN ISO 3061 - of at most 0°C are selected.
4. The use claimed in claims 1 to 3, characterized in that mono- or diglycerides of predominantly unsaturated C<sub>16-24</sub> fatty acids or mixtures of these partial glycerides are selected as the lubricant.
- 15 5. The use claimed in any of claims 1 to 4, characterized in that mono- and/or diglycerides of tall oil fatty acid are selected as the lubricant.
6. The use claimed in any of claims 1 to 5, characterized in that drilling fluids containing the lubricant in quantities of 1 to 3% by weight, based on the drilling fluid as a whole, are used.
- 20 7. The use claimed in any of claims 1 to 6, characterized in that the lubricants are used in drilling fluids which contain more than 90% by volume of water.
8. The use claimed in any of claims 1 to 6, characterized in that the lubricants are used in drilling fluids which contain more than 10% by  
25 volume of a water-insoluble oil.
9. The use claimed in any of claims 1 to 8, characterized in that the lubricants are used in drilling fluids which contain water-insoluble oils selected from the group consisting of
- a) esters of monohydric saturated or unsaturated, linear or branched  
30 alcohols containing 1 to 24 carbon atoms and monobasic saturated or

- unsaturated, linear or branched fatty acids containing 1 to 24 carbon atoms.
- b) mono- and polyhydric, linear or branched alcohols containing 6 to 36 carbon atoms,
- 5 c) mineral oil, diesel oil, paraffin oil,
- d) linear alpha-olefins and derivatives thereof and internal olefins,
- e) carbonic acid esters.
10. The use claimed in any of claims 1 to 9, characterized in that the partial glycerides are used in combination with sulfonates of C<sub>12-24</sub> fatty acids.
- 10 acids.

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